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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,773	07/16/2007	Juergen Wagner	60680-2115	4274

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EXAMINER	
TURNER, SONJI LUCAS	

ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,773	WAGNER ET AL.	
	Examiner	Art Unit	
	SONJI TURNER	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 18-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 18-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 September 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/16/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "16" has been used to designate both bulge 16 and projection 16. At page 12 in the first and second full paragraphs, replace "bulge 16" with --projection 16--.

The drawings are objected and new formal drawings are required. See MPEP §608.02, *Drawing Standards*. Regarding reference characters with alphanumeric numbering, capital letters (at the same height as the numerical portion of each alphanumeric) is appreciated, as lower case letters may be easily and inadvertently misread (for example "b" for 6).

In addition, lead lines to identify base carrier 21 (with views a, b, and c) in Fig. 2 should also be shown. Inclusion may be helpful in comprehension of the instant invention. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Portions of the specification appear to be literal translations into English from a foreign document and contain spelling, grammatical, and idiomatic errors. Examples include, but are not limited to, "at the same time" (at pages 2 and 3 in the first and the second full paragraphs, respectively), and "smallest" (at page 5 first full paragraph). For "from this figure" and "in this figure," consider replacement with the actual figure numbers (at page 10, third full paragraph; at page 11, first full paragraph) to avoid ambiguity. Replace lower case letters with capitalized letters for alphanumeric reference characters for consistency with replacement drawings (see Drawings).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 27-30 and 32-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims listed below recite the following limitations not found in the original specification:

a. Claim 27, "…glass, plastic, and metal."

b. Claim 28, "…Duroplast, Thermoplast, and an elastomer."

c. Claim 29, "…Duroplast, Thermoplast, and an elastomer has a Tg≥80°C."

d. Claim 32, "…co-extruding the base carrier…"

e. Claim 33, "...co-extruding…"

f. Claim 34, "…a glass material, a plastic material, a metal material, a Duroplast material, a Thermoplast material, an elastomer material, and a polyamide material."

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 27-30 do not explicitly identify the structural feature of which the fluid separation device "comprised of one or more of glass, plastic, and metal," recited in claim 27; "comprised of one or more of duroplast, thermoplast, and an elastomer," recited in claim 28; "comprised of one or more of duroplast, thermoplast, and an elastomer…," recited in claim 29; and "comprised of a polyamide material," in claim 30. For examination, the entire fluid separation device is considered to have been made (fabricated) of the one or more the materials recited in claims 27-30.

Claims 28 and 29 contains the trademark/trade names Duroplast and Thermoplast. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a feature of the fluid separation device, or the composition of the fluid separation device. Accordingly, the identification/description is indefinite.

7. Claims 31, 35, and 36 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

g. In claim 31, specific steps recited for forming the recited structural features of the fluid separation device are not identified.

h. In claim 35, specific method steps recited for separating oil from a blow-by gas in a valve cover of a combustion engine using the fluid separation device are not identified.

i. In claim 36, specific method steps recited for separating water from an electrochemical cell using the fluid separation device are not identified.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Neuschwander (US 6648939) and/or Sun (US 4158449).

10. Neuschwander discloses a fluid separation device (10) with at least one base carrier (16, 17) and at least one fluid separator element (13, 14, 15) arranged in the base carrier (figs. 5). The fluid separator element comprises a flow-through tube (figs. 2, 3, 4) with a gas inlet (11) and a gas outlet (12) and a worm-like segment between the gas inlet and gas outlet, the worm-like segment having thread surfaces defining a worm-like gas flow path with an inner wall of the flow-through tube (figs. 6-8). Neuschwander discloses the at least one base carrier and at least one fluid separator element as integrally formed as one piece. However, Neuschwander is silent regarding the dimension for the length of the worm-like segment that is smaller or equal to 0.5 times the pitch of the worm-like segment. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the ratios of length to pitch to obtain the desired separation efficiency without any evidence to the contrary, as optimization of the dimensions for the fluid separation device involves only routine skill in the art.

11. Sun (US 4158449) discloses a fluid separation device with at least one base carrier (12, 13) and at least one fluid separator element (22) arranged in the base carrier. The fluid separator element comprises a flow-through tube (23) with a gas inlet (24) and gas outlet (28) and a worm-

like segment (26) between the inlet and outlet, the worm-like segment having thread surfaces defining a worm-like gas flow path with an inner wall of the flow-through tube. Sun is silent regarding is silent regarding the dimension for the length of the worm-like segment that is smaller or equal to 0.5 times the pitch of the worm-like segment. However, as stated above optimization to the length dimension for the at least one fluid separator element is considered merely a routine skill in the art. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form integrally the base carrier and separator element as one piece, since it has been held that forming into one piece an article which had previously been formed as two pieces involves only routine skill in the art. *Howard v. Detroit Stove Works,* 150 U.S. 164 (1993).

12. Regarding claim 18, the above prior art reference each teach the at least one base carrier comprises two or more separator elements disposed adjacent to one another in a plane of the base carrier.

13. Regarding claim 19, Neuschwander discloses at least two base carriers aligned as claimed to form a generally continuous flow path (figs. 6-8).

14. Regarding claims 20 and 21, Neuschwander discloses the respective flow directions of the worm-like segment in figs. 6-8.

15. Regarding claim 22, Neuschwander discloses the invention but is silent regarding the design as claimed for the outlet-side edge of the two configurations for the separation elements on the first and second base carriers, respectively. However, it would have been an obvious matter of design choice to provide the angle dimensions for the edge of each surface as claimed because it has been held that a change in shape or configuration, without any criticality, is

nothing more than one of numerous shapes that one of ordinary skill in the art will find obvious to provide based on the suitability for the intended final applications. Also, see col. 2, lines 30-40; col. 3, lines 60-65.

16. Regarding claims 23, 24, and 25, the prior art reference teaches a device capable of functioning as claimed. Also, see col. 3, lines 40-45; col. 7, lines 15-20.

17. Regarding claim 26, selection of a fastener as claimed is considered an obvious matter of design choice and/or a substitution for known fasteners available to one skilled in the art.

18. Regarding claims 27-30, the prior art references disclose the claimed invention except for the specific materials recited in the claims. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select any one of the materials, since it has be held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Also, see above Claim Rejections - 35 USC § 112.

19. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuschwander and/or Sun. The teaching for the structural features for the fluid separation device have been set forth above with disclosure of the inventions to Neuschwander and Sun. As such, it would be obvious to one having ordinary skill in the art at the time the invention was made that a method capable of integrally forming the fluid separation device would also be available.

20. Regarding claims 32 and 33, it is obvious that the base carrier and fluid separator element are capable of being formed using known fabrication methods since Neuschwander teaches these structural features. Furthermore, Neuschwander discloses an apparatus made of synthetic resin material and may be produced by injection molding process at column 6, lines 15-20.

21. Regarding claim 34, Neuschwander discloses the at least one base carrier and the at least one fluid separator element are formed of at least one of a glass, plastic, metal, Duroplast, Thermoplast, elastomer, and polyamine material (col. 6, lines 15-20).

22. Regarding claims 35 and 36, Neuschwander teaches a fluid separation device that is capable of separating oil from a blow-by gas in a valve cover of a combustion engine and capable of separating water from an electrochemical cell (col. 4, lines 50-65; col. 5, lines 5-20).

Furthermore, regarding claim 36, Okamoto (US 6045933) teaches a method for separating water from an electrochemical cell with a fluid separation device (col. 3, lines 10-12). As such, It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a fluid separation device to remove water, a waste by-product of the cell, for reuse in the system used by the cell as taught in the prior art.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is listed on PTO-892 (Notice of References Cited). Additionally, each of the following prior art references teach a fluid separation device with at least one base carrier and at least one fluid separator element arranged in the base carrier: US 7163626, US 7004987, US 3915679, US 3966443, and US 3572015.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonji Turner whose telephone number is 571-272-1203. The examiner can normally be reached on Monday - Friday, 10:00 am – 2:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S.T./
1/15/2010

/Duane Smith/
Supervisory Patent Examiner, Art Unit 1797